

Application No.: 10/700195

Docket No.: 05587-00359-US

AMENDMENTS TO THE CLAIMS

1. (cancelled)
2. (currently amended) The ~~copolymer process~~ as claimed in ~~claim 1~~ claim 6, wherein x is a whole number from 500 to 10,000.
3. (currently amended) The copolymer as claimed in ~~claim 1~~ claim 6, wherein said polyoxymethylene blocks also contain structural repeat units of the formula III

$$-(C_yH_{2y}O)_z \quad (III),$$
besides the structural repeat units of the formula I, where y is a whole number from 2 to 4, and z is a whole number from 1 to 3.
4. (currently amended) The copolymer as claimed in ~~claim 1~~ claim 6, wherein R¹ is a

$$-(C_mH_{2m}O)_r-C_mH_{2m}-$$
 radical, m is a whole number from 2 to 4, and r is a whole number from 20 to 1,500.
5. (Original) The copolymer as claimed in claim 4, wherein m is 2.
6. (currently amended) A process for preparing a copolymer containing 70 to 99% by weight based on the copolymer of polyoxymethylene blocks of the structural repeat units of the formula I and from 1 to 30% by weight, blocks containing structural units of the formula II

$$\text{---} [-O-CH_2-]_x \quad (I), \quad \text{---} [-O-R^1-] \quad (II),$$
where R¹ is a divalent radical derived from a hydroxy-terminated aliphatic or cycloaliphatic oligomer or polymer which optionally has ether groups and/or carbonyloxy groups in the chain, and
x is a whole number, at least 10

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~~the copolymer as claimed in claim 1~~, encompassing the following measures:

- (i) forming an initial charge from monomers which form $-O-CH_2-$ units together with monomers of the formula V



where R^1 is as defined ~~in claim 1 above~~, together with a catalyst usually used for polymerizing the monomers forming the $-O-CH_2-$ units, and optionally together with a solvent, and/or with regulators, and

- (ii) carrying out the copolymerization at a temperature of from 120 to 300°C and at a pressure of from 2 to 500 bar.

7. (Previously presented) The process as claimed in claim 6, wherein the resultant block copolymer is treated, after the preparation, with water and/or with a water-soluble alcohol at from 30 to 100°C.

8. (Cancelled)

9. (currently amended) The copolymer as claimed in ~~claim 1~~ claim 6, wherein x is a whole number from 1,500 to 5,000.

10. (currently amended) The copolymer as claimed in ~~claim 1~~ claim 6, wherein R^1 is a $-(C_mH_{2m}-O-)_r-C_mH_{2m}-$ radical, m is a whole number from 2 to 4, and r is a whole number from 50 to 1,000.

11. (Previously presented) The process as claimed in claim 6, wherein the resultant block copolymer is treated, after the preparation, with water and/or with a water-soluble alcohol at from 50 to 80°C.

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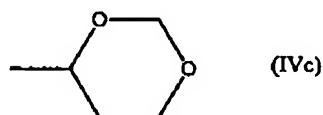
12. cancelled

13. (currently amended) The copolymer as claimed in ~~claim 1~~ claim 6, wherein said blocks composed of homo- or copolyoxymethylenes in the copolymer of the formula I is from 80 to 95% by weight, and the proportion of structural repeat units of the formula II is from 5 to 20% by weight, based on the copolymer.

14. (currently amended)) The copolymer as claimed in ~~claim 1~~ claim 6, wherein said polyoxymethylene blocks are prepared by reacting trioxane with a cyclic ether and with a third monomer of the formula



where R^2 and R^2 , independently of one another, are radicals of the formula IVa, IVb, or IVc



wherein Z is a chemical bond, $-O-$, or $-O-R^3-O-$ and

R^3 is C_2-C_8 -alkylene or C_2-C_8 -cycloalkylene.

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15. (currently amended) The copolymer as claimed in ~~claim 1~~ claim 6, which further contains from 0.1 to 20 mol %, based on the copolymer block, of co-components which are derived from ethylene oxide, propylene 1,2-oxide, butylene 1,2-oxide, butylene 1,3-oxide, 1,3-dioxane, 1,3-dioxolane, and 1,3-dioxepan.
16. (currently amended) The copolymer as claimed in ~~claim 1~~ claim 6, which further contains from 0.5 to 10 mol %, based on the copolymer block, of co-components which are derived from ethylene oxide, propylene 1,2-oxide, butylene 1,2-oxide, butylene 1,3-oxide, 1,3-dioxane, 1,3-dioxolane, and 1,3-dioxepan.
17. (currently amended) The copolymer as claimed in ~~claim 1~~ claim 6, wherein the formula I is present in an amount from at least 80% by weight.
18. (currently amended) The copolymer as claimed in ~~claim 1~~ claim 6, wherein the formula I is present in an amount from at least 90% by weight.